

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Previously Amended) A process for reclaiming fibers from a resinous fibrous product comprising the steps of:

(a) selecting an acid for use in an acid bath solution as a function of a type of a resinous residue found on the resinous fibrous product;

(b) inserting the resinous fibrous product into a washer/extractor machine, wherein said resinous fibrous product comprises a form including a strand form and a mat form;

(c) while said resinous fibrous product is in said machine, performing the steps of:

(i) introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period of time sufficient to substantially remove said resinous residue from a fiber portion of the resinous fibrous product;

(ii) removing said acid bath solution and said resinous residue from said washer/extractor machine;

(iii) rinsing said fiber portion to remove any residual acid bath solution and resinous residue;

(d) removing said fiber portion from said washer/extractor machine; and

(e) dewatering said fiber portion.

2. (Original) The process of claim 1 further comprising the step of:

(iv) applying a sizing composition to said fiber portion prior to the step of (d) removing said fiber portion from said washer/extractor machine.

3. (Original) The process of claim 1 further comprising the step of forming a fiberglass mat from said fiber portion after the step of dewatering said fiber portion.

4. (Original) The process of claim 1, wherein the step of (b) inserting the resinous fibrous product within a washer/extractor machine comprises the step of (b) inserting the resinous fibrous product within a single chamber washer/extractor machine.

5. (Original) The process of claim 1, wherein the step of (b) inserting the resinous fibrous product within a washer/extractor machine comprises the step of (b) inserting the resinous fibrous product within an electronically controlled single chamber washer/extractor machine

6. (Original) The process of claim 1, wherein the step of (b) inserting the resinous fibrous product within a washer/extractor machine comprises the step of (b) inserting the resinous fibrous product within a multi-chamber washer/extractor machine.

7. (Original) The process of claim 1, wherein the step of (b) inserting the resinous fibrous product within a washer/extractor machine comprises the step of (b) inserting the resinous fibrous product within an electronically controlled multi-chamber washer/extractor machine.

8. (Original) The method of claim 1, further comprising the step of (f) drying said fiber portion in an oven.

9. (Original) The method of claim 1, wherein the acid bath solution comprises said acid and a quantity of water in a ratio of between ten and fifty percent acid to water by volume.

10. (Original) The method of claim 1, wherein said resinous fibrous product comprises glass fibers.

11. (Original) The method of claim 1, further comprising the steps of:
forming a slurry comprising said fibers and a binder; and
forming a wet-process mat from said slurry.

12. (Previously Amended) The method of claim 11, wherein the step of forming said slurry comprises the step of forming a slurry within said washer/extractor machine, said slurry comprising said fibers and a binder.

13. (Currently Amended) A method for recovering a resinous residue from a resinous fibrous product [that may be] capable of being further processed into a usable nitrogen product comprising the steps of:

selecting an acid for use in an acid bath solution as a function of a type of the resinous residue found on the resinous fibrous product;

inserting the resinous fibrous product within a washer/extractor machine, wherein the resinous fibrous product is in the form of a plurality of strands or in the form of a mat;

introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period of time sufficient to substantially remove the resinous residue from a fibrous portion of the resinous fibrous product;

removing said acid bath solution and the resinous residue from said washer/extractor machine;

introducing said acid bath solution and the resinous residue into a cooling line to precipitate the resinous residue; and

removing the precipitated resinous residue from said acid bath solution using a clarifier.

14. (Original) The process of claim 13, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within a single chamber washer/extractor machine.

15. (Original) The process of claim 13, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within an electronically controlled single chamber washer/extractor machine.

16. (Original) The process of claim 13, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within a multi-chamber washer/extractor machine.

17. (Original) The process of claim 13, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within an electronically-controlled multi-chamber washer/extractor machine.

18. (Previously Amended) A method for reclaiming fibrous and a resinous residue from a resinous fibrous product in the form of a strand or a mat comprising the steps of:

selecting an acid for use in an acid bath solution as a function of a type of the resinous residue found on the resinous fibrous product;

inserting the resinous fibrous product within a washer/extractor machine;

introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period of time sufficient to substantially remove the resinous residue from a fibrous portion of the resinous fibrous product;

removing said acid bath solution and said resinous residue from said washer/extractor machine;

rinsing said fibrous portion to remove any residual acid bath solution and resinous residue;

removing said fibrous portion from said washer/extractor machine;

dewatering said fibrous portion;

introducing said acid bath solution and said resinous residue into a cooling line to precipitate said resinous residue; and

removing said precipitated resinous residue from said acid bath solution using a clarifier.

19. (Original) The process of claim 18, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within an electronically-controlled single-chamber washer/extractor machine

20. (Original) The process of claim 18, wherein the step of inserting the resinous fibrous product within a washer/extractor machine comprises the step of inserting the resinous fibrous product within a multi-chamber washer/extractor machine.

21. (Original) The process of claim 18, further comprising the step of drying said fibrous portion in an oven.

22. (Original) The process of claim 18, further comprising the step of applying a sizing composition to said fibrous portion prior to the step of removing said fibrous portion from said washer/extractor machine.

23. (Original) The process of claim 18, wherein said acid bath solution comprises said acid and a quantity of water in a ratio of between ten and fifty percent acid to water by volume.

24. (Original) The process of claim 23, wherein said acid is phosphoric acid.

25. (Original) The process of claim 18 further comprising the step of forming a fibrous mat from said fibrous portion after the step of dewatering said fibrous portion.